


# RITTIKORN

## TANGTRONGCHIT GAME PROGRAMMER

### CONTACT

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 <https://rittikornt.com/>

### SKILLS

#### LANGUAGES

- C/C++
- C#
- GLSL/HLSL
- GPGPU/Compute
- PYTHON (Familiar)
- SQL (Familiar)

#### ENGINES

- CUSTOM ENGINE
- UNITY
- UNREAL 4

#### LIBRARIES

- Opengl, Vulkan
- dear imgui
- GLFW
- STL

#### SOFTWARE

- Visual Studio/XCode
- RenderDoc/Pix
- Nsight/Razor
- GIT/SVN/Perforce
- CMake
- MySQL
- Maya/Blender
- Photoshop
- Substance Painter
- Trello/Asana/Jira
- Slack

#### PERSONAL

- Self-motivated
- Communication
- Organization
- Team Player

### EXPERIENCE

#### ROLE: RENDERING ENGINEER

FEB 2019 – PRESENT

MAGNOPUS | **UNITY ENGINE (C#, HLSL), UE4 (C++, BP)**

*VR&AR Experience*

- Research and implement rendering techniques on various platforms (VR, AR, PC, mobiles) for projects and internal shared technology.
- GPU/CPU profiling, bottleneck investigation, performance optimization for target platforms/requirements utilizing various tech such as GPGPU, Unity Job/DOTS/SRP, DXR.
- Worked on 10+ Unity/Unreal projects spanning across different platforms including (PC, Oculus Rift/Go/Quest, Mobile Android/IOS, PSVR).
- Created contents/graphics related tools to empower and improve artists/designers workflow.

#### ROLE: JR GAME DEVELOPER

DEC 2018 – FEB 2019

FORESIGHT SPORTS | **CUSTOM ENGINE (C++)**

*3D Realistic Golf Simulator on a Custom Launch Monitor hardware*

- Worked on a golf simulation team to support multiple live products.
- Code base maintenance, bug fixing, implemented new gameplay/UI features.
- Integrated cloud communication and management app support to the older games.

### PERSONAL PROJECTS

#### ROLE: GAME PROGRAMMER, GAME DESIGNER

OCT 2020 – PRESENT

TBA | **UNITY ENGINE (C#, HDRP)**

SOLO PROJECT

*3D Multiplayer Platform Fighter game/tech*

- Implemented GGPO-inspired P2P rollback-netcode framework for lobby based multiplayer game.
- Generic serialization system for arbitrary game replay support, editor tools for auto-playback + desync detection + per-frame step-through, steam api integration.
- Custom 3D physics engine for fighting game: deterministic (purely fixed-point, integer math), implemented with multithreaded burst + job system to support up to 10 frames of rollback.
- General Rollback compensation system for 3D animation, particles vfx, ui animation, audio.
- Gameplay system: modular character/attack/movesets, combat system (framedata, execution, combo, gauge, wall bounce/splat), gameitem system, destructible environment, etc.

#### ROLE: ENGINE/GRAPHIC PROGRAMMER

JULY 2018

Night Engine | **CUSTOM ENGINE (C++, Lua, GLSL)**

SOLO PROJECT

*3D component-based custom engine*

- Designed and implemented the overall engine's architecture, graphics api abstraction.
- Core features: reflection, automate serialization, factory, component-based architecture, message system, prefab system.
- Graphics features: deferred rendering, PBR, IBL, shadow maps + PCF filtering, SSAO, bloom, TAA.

#### ROLE: GAMEPLAY PROGRAMMER

OCT 2017

Trappist Landing (PAX West 2018) | **UNITY ENGINE (C#)**

TEAM SIZE: 16

*3D First Person Exploration Narrative Driven Game*

- Custom controller that blends smoothly into Cinemachine cinematic sequences.
- Implemented the interactive detection system for interaction, scanning plants.
- Reactive breath system: determines the player breathing and heartbeat based on the player gameplay states (action, breathing, fear intensity, heart rate intensity).

#### ROLE: GAMEPLAY PROGRAMMER, GAME DESIGNER

JAN 2017

Cross Counter Tactics | **UNITY ENGINE (C#)**

TEAM SIZE: 5

*2.5D Turn-based strategy game with 2D sprite on a 3D Map*

- Implemented the grid-based map system, turn-based unit actions, character selection.
- A\* pathfinding for unit's movement on the grid-based map.
- Built the In-game map editor with support for: variable map size, grid height modifiable, texturing, proc-gen, and JSON serialization.

### EDUCATION

**Bachelor of Science (B.S.), Computer Science & Game Design**

(Graduated: August 2018)

DigiPen Institute of Technology, USA (Redmond, WA)

**Bachelor of Science (B.S.), Creative Digital Technology**

Thammasat University, Thailand